

COMPLAINT

Plaintiff Virginia Innovation Sciences, Inc. ("VIS") files this Complaint against LG Electronics Inc., LG Electronics U.S.A., Inc. and LG Electronics MobileComm USA, Inc. (collectively, "LG" or "Defendants"), and hereby alleges as follows:

I. NATURE OF THE ACTION

- 1. This is a patent infringement action to end Defendants' unauthorized and infringing manufacture, use, sale, offering for sale, and/or importation of methods and products incorporating Plaintiff VIS's patented inventions.
- 2. VIS is owner of all right, title, and interest in and to U.S. Patent No. 7,899,492 (the "'492 patent"), U.S. Patent No. 8,050,711 (the "'711 patent"), U.S. Patent No. 8,903,451 (the "'451 patent"), U.S. Patent No. 8,948,814 (the "'814 patent"), U.S. Patent No. 9,118,794 (the "'794 patent"), and U.S. Patent No. 8,712,471 (the "'471 patent") (collectively, the "Asserted Patents"). VIS is also owner of all right, title, and interest in and to U.S. Patent

Application No. 14/795,616, which has been allowed for issuance by the U.S. Patent and Trademark Office ("'616 Application").

- 3. Defendants manufacture, provide, use, sell, offer for sale, import, and/or distribute infringing products and services; and encourage others to use its products and services in an infringing manner, including their customers.
- 4. Plaintiff VIS seeks past and future damages and prejudgment and post-judgment interest for LG's past infringement of the Asserted Patents.

II. THE PARTIES

- 5. Plaintiff Virginia Innovation Sciences is a corporation organized and existing under the laws of the State of Virginia, with its principal place of business located in this judicial district at 6301 Edsall Road, Suite 517, Alexandria, Virginia 22312.
- 6. Upon information and belief, LG Electronics, Inc. is a corporation organized under the laws of Korea, with its principal place of business located at LG Twin Tower 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, 150-721, Republic of Korea, where it can be served with process. Upon information and belief, LG Electronics, Inc. is authorized to do business in Virginia.
- 7. Upon information and belief, LG Electronics U.S.A., Inc. is a wholly owned subsidiary of LG Electronics and is a Delaware corporation with its principal place of business located at 920 Sylvan Avenue, Englewood Cliffs, New Jersey 07632. Upon information and belief, LG Electronics U.S.A., Inc. is authorized to do business in Virginia where it can be served with process through its registered agent Corporation Service Company, Bank of America Center, 16th Floor, 1111 East Main Street, Richmond, Virginia 23219.

8. Upon information and belief, LG Electronics MobileComm USA, Inc. is a California corporation with its principal place of business located at 10101 Old Grove Road, San Diego, California 92131. LG Electronics MobileComm USA, Inc. may be served with process through its registered agent National Registered Agents, Inc., 818 W. Seventh Street, Suite 930, Los Angeles, California 90017.

III. JURISDICTION AND VENUE

- 9. This is an action for patent infringement, which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§ 271, 281, 283, 284, and 285. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).
- 10. This Court has personal jurisdiction over LG, and venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), (c), and 1400. This Court has personal jurisdiction over LG because, among other things, LG has established minimum contacts within the forum such that the exercise of jurisdiction over LG will not offend traditional notions of fair play and substantial justice. For example, LG has placed products that practice and/or embody the claimed inventions of the Asserted Patents into the stream of commerce with the reasonable expectation and/or knowledge that purchasers and users of such products were located within this District. In addition, LG has sold, advertised, marketed, and distributed products in this district that practice the claimed inventions of the Asserted Patents. LG derives substantial revenue from the sale of infringing products distributed within the district, and/or expects or should reasonably expect its actions to have consequences within the district, and derive substantial revenue from interstate and international commerce.

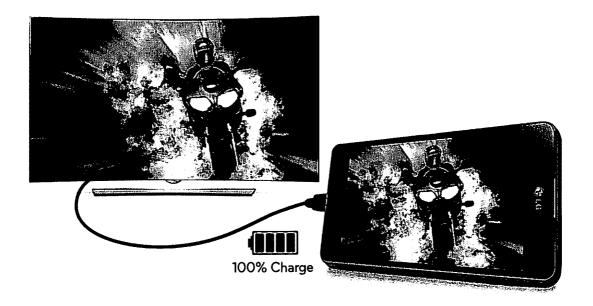
IV. PLAINTIFF'S PATENTS

- 11. The '492 patent was filed on June 24, 2005 and issued on March 1, 2011. The '711 patent was filed on January 21, 2011 and issued on November 1, 2011. The '451 patent was filed on February 11, 2014 and issued on December 2, 2014. The '814 patent was filed on September 8, 2014 and issued on February 3, 2015. The '794 patent was filed on November 23, 2014 and issued on August 25, 2015. The '471 patent was filed on March 18, 2013 and issued on April 29, 2014. The '616 Application was filed on July 9, 2015, amended in response to non-final office action on December 11, 2015, and allowed for issuance on December 29, 2015. The Asserted Patents and '616 Application generally disclose systems and methods for converting video signals for a mobile terminal to accommodate reproduction by an alternative display terminal. The video signal appropriate for an alternative display terminal. This converted video signal is then provided to accommodate the corresponding video display on a screen provided by the alternative (e.g., external) display terminal. See '492 Patent, Abstract.
- 12. VIS has obtained all substantial right and interest to the Asserted Patents and '616 Application, including all rights to recover for all past and future infringements thereof.

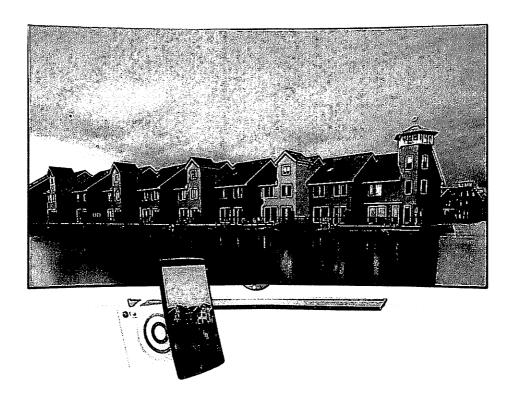
V. DEFENDANTS' ACTS

13. LG has infringed and continues to infringe the Asserted Patents by making, selling, offering for sale, importing, and using products and software in an infringing manner, including but not limited to LG's smartphone, mobile phone, and tablet products, as well as any other products operating in a substantially similar manner. These products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. For example, as stated on LG's website, one or

more of LG's products allows users to connect an LG "mobile device to [the user's] TV through an MHL cable to see [the user's] content up on the big screen":



http://www.lg.com/us/experience-tvs/smart-tv/connect. By way of further example, one or more of LG's products allows users "to wirelessly mirror content" from an LG mobile device, providing "a great way to display a [user's] personal media, so for example [the user's] . . . recital videos can easily be viewed on the big screen":



http://www.lg.com/us/experience-tvs/smart-tv/connect.

- 14. Moreover, LG provides its customers with the accused products and software and instructs its customers to use the products and software in an infringing manner, including through its website at http://www.lg.com/us/support.
- 15. In addition, LG knowingly, actively induced and continues to knowingly actively induce (or is willfully blind to the) infringement of one or more of the Asserted Patents within this district by making, using, offering for sale, and selling infringing products, as well as by contracting with others to use, market, sell, and offer to sell infringing products, all with knowledge of the Asserted Patents, and their claims, with knowledge that their customers will use, market, sell, and offer to sell infringing products in this district and elsewhere in the United States, and with the knowledge and specific intent to encourage and facilitate infringing sales and use of the products by others within this district and the United States by creating and

disseminating promotional and marketing materials, instructional materials, and product manuals, and technical materials related to the infringing products.

Asserted Patents by others in this district, and continues to contribute to the infringement of one or more of the Patents by others in this district by selling or offering to sell components of infringing products in this district, which components constitute a material part of the inventions of the Asserted Patents, knowing of the Patents and their claims, knowing those components to be especially made or especially adapted for use to infringe one or more of the Asserted Patents, and knowing that those components are not staple articles or commodities of commerce suitable for substantial non-infringing use. LG has not implemented a design around or otherwise taken any remedial action with respect to the Asserted Patents. VIS will rely on a reasonable opportunity for discovery of evidentiary information regarding additional infringing products.

COUNT ONE <u>PATENT INFRINGEMENT – U.S. PATENT NO. 7,899,492</u>

- 17. Plaintiff VIS realleges and incorporates herein paragraphs 1–16.
- Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.
- 19. The '492 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

- 20. LG has directly infringed, and continues to directly infringe, one or more claims of the '492 patent in this judicial district and elsewhere in Virginia and the United States.
- 21. LG has directly infringed, and continues to directly infringe the '492 patent, including but not limited to at least one or more of claim 23 and one or more dependent claims, by, among other things, making, using, offering for sale, selling, and/or importing, smartphones/tablets that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. Such devices include, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG.

- 22. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '492 patent by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of the products accused of infringing the '492 patent ("the '492 Accused Products"), in this District and elsewhere in the United States.
- 23. On information and belief, despite having knowledge of the '492 patent, LG has specifically intended for persons who acquire and use the '492 Accused Products, including without limitation end-users of the '492 Accused Products, to acquire and use such devices in such a way that infringes the '492 patent, including but not limited to at least one or more of claims 1 and 23 and one or more dependent claims, and LG knew or should have known that their actions were inducing infringement.

- 24. Defendants have had knowledge of the '492 patent and the infringing nature of their activities at least as early the date when VIS effected service of this Complaint.
- 25. Direct infringement is the result of activities performed by third parties in relation to the '492 Accused Products, including without limitation by end users enabled and encouraged by LG to use the '492 Accused Products in their normal, customary way to infringe the '492 patent.
- With knowledge of the '492 patent, LG directs and aids third parties, including without limitation end-users of the '492 Accused Products, to infringe the '492 patent by, among other things, (i) enabling a user of the '492 Accused Products to use the products to support receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '492 Patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation located at http://www.lg.com/us/support) to end-users of the '492 Accused Products for using the products in their customary way; (iii) advertising the '492 Accused Products' support of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '492 patent, all with knowledge that the induced acts constitute patent infringement. LG possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '492 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

27. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe the '492 patent, including but not limited

to at least one or more of claims 1 and 23 and one or more dependent claims, by contributing to the infringement of the '492 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '492 Accused Products.

- 28. The '492 Accused Products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. LG knows that the '492 Accused Products (i) constitute a material part of the inventions claimed in the '492 patent; (ii) are especially made or adapted to infringe the '492 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '492 patent.
- VIS is informed and believes that LG intends to and will continue to directly and indirectly infringe the '492 patent. VIS has been damaged as a result of LG's infringing conduct described in this Count. LG is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

<u>COUNT TWO</u> <u>PATENT INFRINGEMENT – U.S. PATENT NO. 8,050,711</u>

- 30. Plaintiff VIS realleges and incorporates herein paragraphs 1–29.
- 31. Plaintiff VIS is the assignee of the '711 patent, entitled "Methods, System and Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover

damages for past and future infringements, and the exclusive right to settle any claims of infringement.

32. The '711 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

- 33. LG has directly infringed, and continues to directly infringe, one or more claims of the '711 patent in this judicial district and elsewhere in Virginia and the United States.
- 34. LG has directly infringed, and continues to directly infringe the '711 patent, including but not limited to at least one or more of claims 15 and 21 and one or more dependent claims by, among other things, making, using, offering for sale, selling, and/or importing smartphones/tablets that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. Such devices include, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG.

- 35. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '711 patent by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of the products accused of infringing the '711 patent ("the '711 Accused Products"), in this District and elsewhere in the United States.
- 36. On information and belief, despite having knowledge of the '711 patent, LG has specifically intended for persons who acquire and use the '711 Accused Products, including

without limitation end-users of the '711 Accused Products, to acquire and use such devices in such a way that infringes the '711 patent, including but not limited to at least one or more of claims 1, 15 and 21 and one or more dependent claims, and LG knew or should have known that their actions were inducing infringement.

- 37. Defendants have had knowledge of the '711 patent and the infringing nature of their activities at least as early the date when VIS effected service of this Complaint.
- 38. Direct infringement is the result of activities performed by third parties in relation to the '711 Accused Products, including without limitation by end users enabled and encouraged by LG to use the '711 Accused Products in their normal, customary way to infringe the '711 patent.
- With knowledge of the '711 patent, LG directs and aids third parties, including without limitation end-users of the '711 Accused Products, to infringe the '711 patent by, among other things, (i) enabling a user of the '711 Accused Products to use the products to support receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '711 Patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation located at http://www.lg.com/us/support) to end-users of the '711 Accused Products for using the products in their customary way; (iii) advertising the '711 Accused Products' support of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '711 patent, all with knowledge that the induced acts

constitute patent infringement. LG possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '711 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

- 40. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe the '711 patent, including but not limited to at least one or more of claims 1, 15, and 21 and one or more dependent claims, by contributing to the infringement of the '711 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '711 Accused Products.
- 41. The '711 Accused Products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. LG knows that the '711 Accused Products (i) constitute a material part of the inventions claimed in the '711 patent; (ii) are especially made or adapted to infringe the '711 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '711 patent.
- 42. VIS is informed and believes that LG intends to and will continue to directly and indirectly infringe the '711 patent. VIS has been damaged as a result of LG's infringing conduct described in this Count. LG is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

<u>COUNT THREE</u> <u>PATENT INFRINGEMENT – U.S. PATENT NO. 8,903,451</u>

- 43. Plaintiff VIS realleges and incorporates herein paragraphs 1–42.
- Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.
- 45. The '451 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

- 46. LG has directly infringed, and continues to directly infringe, one or more claims of the '451 patent in this judicial district and elsewhere in Virginia and the United States.
- 47. In particular, LG has directly infringed, and continues to directly infringe the '451 patent, including but not limited to at least one or more of claims 1, 30, and 47 and one or more dependent claims, by, among other things, making, using, offering for sale, selling, and/or importing smartphones/tablets that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. Such devices include, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG.

- 48. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '451 patent by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of the products accused of infringing the '451 patent ("the '451 Accused Products"), in this District and elsewhere in the United States.
- 49. On information and belief, despite having knowledge of the '451 patent, LG has specifically intended for persons who acquire and use the '451 Accused Products, including without limitation end-users of the '451 Accused Products, to acquire and use such devices in such a way that infringes the '451 patent, including but not limited to at least one or more of claims 1, 30, 47, and 71 and one or more dependent claims, and LG knew or should have known that their actions were inducing infringement.
- 50. Defendants have had knowledge of the '451 patent and the infringing nature of their activities at least as early the date when VIS effected service of this Complaint.
- 51. Direct infringement is the result of activities performed by third parties in relation to the '451 Accused Products, including without limitation by end users enabled and encouraged by LG to use the '451 Accused Products in their normal, customary way to infringe the '451 patent.
- 52. With knowledge of the '451 patent, LG directs and aids third parties, including without limitation end-users of the '451 Accused Products, to infringe the '451 patent by, among other things, (i) enabling a user of the '451 Accused Products to use the products to support receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '451 patent; (ii) providing

instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation located at http://www.lg.com/us/support) to end-users of the '451 Accused Products for using the products in their customary way; (iii) advertising the '451 Accused Products' support of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '451 patent, all with knowledge that the induced acts constitute patent infringement. LG possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '451 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

- 53. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe the '451 patent, including but not limited to at least one or more of claims 1, 30, 47, and 71 and one or more dependent claims, by contributing to the infringement of the '451 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '451 Accused Products.
- 54. The '451 Accused Products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. LG knows that the '451 Accused Products (i) constitute a material part of the inventions claimed in the '451 patent; (ii) are especially made or adapted to infringe the '451 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that are capable of receiving video signals for a

mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '451 patent.

55. VIS is informed and believes that LG intends to and will continue to directly and indirectly infringe the '451 patent. VIS has been damaged as a result of LG's infringing conduct described in this Count. LG is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

<u>COUNT FOUR</u> PATENT INFRINGEMENT – U.S. PATENT NO. 8,948,814

- 56. Plaintiff VIS realleges and incorporates herein paragraphs 1–55.
- Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.
- 58. The '814 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

- 59. LG has directly infringed, and continues to directly infringe, one or more claims of the '814 patent in this judicial district and elsewhere in Virginia and the United States.
- 60. In particular, LG has directly infringed, and continues to directly infringe the '814 patent, including but not limited to at least one or more of claims 1, 11, 28, and one or more

dependent claims, by, among other things, making, using, offering for sale, selling, and/or importing smartphones/tablets that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. Such devices include, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG.

- Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '814 patent by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of the products accused of infringing the '814 patent ("the '814 Accused Products"), in this District and elsewhere in the United States.
- 62. On information and belief, despite having knowledge of the '814 patent, LG has specifically intended for persons who acquire and use the '814 Accused Products, including without limitation end-users of the '814 Accused Products, to acquire and use such devices in such a way that infringes the '814 patent, including but not limited to at least one or more of claims 1, 11, 18, 28, and 41 and one or more dependent claims, and LG knew or should have known that their actions were inducing infringement.
- 63. Defendants have had knowledge of the '814 patent and the infringing nature of their activities at least as early the date when VIS effected service of this Complaint.
- 64. Direct infringement is the result of activities performed by third parties in relation to the '814 Accused Products, including without limitation by end users enabled and encouraged

by LG to use the '814 Accused Products in their normal, customary way to infringe the '814 patent.

without limitation end-users of the '814 Accused Products, to infringe the '814 patent by, among other things, (i) enabling a user of the '814 Accused Products to use the products to support receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '814 patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation located at http://www.lg.com/us/support) to end-users of the '814 Accused Products for using the products in their customary way; (iii) advertising the '814 Accused Products' support of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '814 patent, all with knowledge that the induced acts constitute patent infringement. LG possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '814 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

66. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe the '814 patent, including but not limited to at least one or more of claims 1, 11, 18, 28, and 41 and one or more dependent claims, by contributing to the infringement of the '814 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '814 Accused Products.

- 67. The '814 Accused Products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. LG knows that the '814 Accused Products (i) constitute a material part of the inventions claimed in the '814 patent; (ii) are especially made or adapted to infringe the '814 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '814 patent.
- 68. VIS is informed and believes that LG intends to and will continue to directly and indirectly infringe the '814 patent. VIS has been damaged as a result of LG's infringing conduct described in this Count. LG is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

<u>COUNT FIVE</u> <u>PATENT INFRINGMENT – U.S. PATENT NO. 9,118,794</u>

- 69. Plaintiff VIS realleges and incorporates herein paragraphs 1-68.
- Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.
- 71. The '794 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

- 72. LG has directly infringed, and continues to directly infringe, one or more claims of the '794 patent in this judicial district and elsewhere in Virginia and the United States.
- 73. In particular, LG has directly infringed, and continues to directly infringe the '794 patent, including but not limited to at least one or more of claims 1, 15, 19, and one or more dependent claims, by, among other things, making, using, offering for sale, selling, and/or importing smartphones/tablets that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. Such devices include, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG.

- 74. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '794 patent by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of the products accused of infringing the '794 patent ("the '794 Accused Products"), in this District and elsewhere in the United States.
- 75. On information and belief, despite having knowledge of the '794 patent, LG has specifically intended for persons who acquire and use the '794 Accused Products, including without limitation end-users of the '794 Accused Products, to acquire and use such devices in such a way that infringes the '794 patent, including but not limited to at least one or more of claims 1, 15, 19 and one or more dependent claims, and LG knew or should have known that their actions were inducing infringement.

- 76. Defendants have had knowledge of the '794 patent and the infringing nature of their activities at least as early the date when VIS effected service of this Complaint.
- 77. Direct infringement is the result of activities performed by third parties in relation to the '794 Accused Products, including without limitation by end users enabled and encouraged by LG to use the '794 Accused Products in their normal, customary way to infringe the '794 patent.
- With knowledge of the '794 patent, LG directs and aids third parties, including without limitation end-users of the '794 Accused Products, to infringe the '794 patent by, among other things, (i) enabling a user of the '794 Accused Products to use the products to support receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '794 patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation located at http://www.lg.com/us/support) to end-users of the '794 Accused Products for using the products in their customary way; (iii) advertising the '794 Accused Products' support of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '794 patent, all with knowledge that the induced acts constitute patent infringement. LG possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '794 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

79. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe the '794 patent, including but not limited

to at least one or more of claims 1, 15, 19 and one or more dependent claims by contributing to the infringement of the '794 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '794 Accused Products.

- 80. The '794 Accused Products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. LG knows that the '794 Accused Products (i) constitute a material part of the inventions claimed in the '794 patent; (ii) are especially made or adapted to infringe the '794 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '794 patent.
- 81. VIS is informed and believes that LG intends to and will continue to directly and indirectly infringe the '794 patent. VIS has been damaged as a result of LG's infringing conduct described in this Count. LG is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

<u>COUNT SIX</u> <u>PATENT INFRINGMENT – U.S. PATENT NO. 8,712,471</u>

- 82. Plaintiff VIS realleges and incorporates herein paragraphs 1–81.
- Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover

damages for past and future infringements, and the exclusive right to settle any claims of infringement.

84. The identified claims of the '471 patent are valid, enforceable and were duly issued in full compliance with Title 35 of the United States Code.

- 87. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '471 patent by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of LG's products including, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG ("the '471 Accused Products"), in this District and elsewhere in the United States.
- 88. On information and belief, despite having knowledge of the '471 patent, LG has specifically intended for persons who acquire and use the '471 Accused Products, including without limitation end-users of the '471 Accused Products, to acquire and use such devices in such a way that infringes the '471 patent, including but not limited to at least one or more of claims 2, 43, 44, and 45 and one or more dependent claims, and LG knew or should have known that their actions were inducing infringement.
- 89. Defendants have had knowledge of the '471 patent and the infringing nature of their activities at least as early the date when VIS effected service of this Complaint.
- 90. Direct infringement is the result of activities performed by third parties in relation to the '471 Accused Products, including without limitation by end users enabled and encouraged

by LG to use the '471 Accused Products in their normal, customary way to infringe the '471 patent.

without limitation end-users of the '471 Accused Products, to infringe the '471 patent by, among other things, (i) enabling a user of the '471 Accused Products to use the products to support receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '471 patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation located at http://www.lg.com/us/support) to end-users of the '471 Accused Products for using the products in their customary way; (iii) advertising the '471 Accused Products' support of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '471 patent, all with knowledge that the induced acts constitute patent infringement. LG possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '471 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

92. Based on the information presently available to VIS, VIS contends that LG has indirectly infringed, and continues to indirectly infringe the '471 patent, including but not limited to at least one or more of claims 2, 43, 44, and 45 and one or more dependent claims, by contributing to the infringement of the '471 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '471 Accused Products.

- 93. The '471 Accused Products are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. LG knows that the '471 Accused Products (i) constitute a material part of the inventions claimed in the '471 patent; (ii) are especially made or adapted to infringe the '471 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal as claimed in the '471 patent.
- 94. VIS is informed and believes that LG intends to and will continue to directly and indirectly infringe the '471 patent. VIS has been damaged as a result of LG's infringing conduct described in this Count. LG is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

NOTICE OF PROVISIONAL RIGHTS PURSUANT TO 35 U.S.C. § 154(d) U.S. PATENT APPLICATION NO. 14/795,616

- 95. Plaintiff VIS realleges and incorporates herein paragraphs 1–94.
- 96. The '616 Application was filed on July 9, 2015 and amended in response to non-final office action on December 11, 2015. U.S. Patent and Trademark Office issued a Notice of Allowance of the '616 Application on December 29, 2015. The U.S. Patent and Trademark Office published the '616 Application on January 7, 2016.
- 97. Plaintiff VIS is the applicant of the '616 Application, entitled "Methods, System and Apparatus for Displaying the Multimedia Information from Wireless Communication Networks," and holds all substantial rights in the same. With this Complaint, Plaintiff VIS is putting LG on actual notice of the published '616 Application. Once a patent issues on the '616

Application, Plaintiff VIS will be entitled to provisional rights to obtain damages if LG makes, uses, sells, offers for sale, or imports into the United States the inventions claimed in the published application after the date of this notice, pursuant to 35 U.S.C. § 154(d).

- 98. Both before and after the date of publication of the '616 Application, LG has directly infringed, and continues to infringe, one or more claims of the '616 Application as amended, including but not limited to at least one or more of claims 3, 36 and one or more dependent claims, by, among other things, making, using, offering for sale, selling, and/or importing smartphones/tablets that are capable of receiving video signals for a mobile terminal and converting those signals to accommodate reproduction by an alternative display terminal. Such devices include, but are not limited to, LG G Flex, LG G Flex 2, LG G2, LG G3, LG G4, LG Nexus 4, LG Nexus 5, LG Nitro HD, LG Optimus G Pro, LG Optimus L9, LG Spectrum, LG Spectrum 2, LG V10, LG G Pad X 10.1, and all reasonably similar products of LG ("'616 Accused Products").
- 99. Based on the information presently available to VIS, VIS contends that both before and after the date of publication of the '616 Application, LG has indirectly infringed, and continues to indirectly infringe, one or more claims of the '616 Application as amended, including but not limited to at least one or more of claims 3, 36 and one or more dependent claims, by inducing direct infringement by third parties, including without limitation manufacturers, resellers, and/or end users of '616 Accused Products, in this District and elsewhere in the United States.
- 100. Based on the information presently available to VIS, VIS contends that both before and after the date of publication of the '616 Application, LG has indirectly infringed, and continues to indirectly infringe one or more claims of the '616 Application as amended,

including but not limited to at least one or more of claims 3, 36 and one or more dependent claims, by contributing to the infringement of the '616 Application, either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '616 Accused Products.

101. VIS is informed and believes that LG intends to and will continue to practice the invention claimed in the '616 Application as amended. VIS has been damaged as a result of LG's conduct. VIS reserves all rights regarding LG's conduct, including all rights to obtain a reasonable royalty from LG under 35 U.S.C. § 154, and to amend this Complaint to assert claims against LG for patent infringement under 35 U.S.C. §§ 271, 281, 283, 284, and 285 upon the issuance of the '616 Application as a patent by the U.S. Patent and Trademark Office.

VII. JURY DEMAND

102. Plaintiff VIS demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to Fed. R. Civ. P. 38.

VIII. PRAYER FOR RELIEF

WHEREFORE, plaintiff Virginia Innovation Sciences, Inc. prays for judgment and seeks relief against LG as follows:

- Judgment that one or more claims of U.S. Patent No. 7,899,492, U.S. Patent No. 8,050,711, U.S. Patent No. 8,903,451, U.S. Patent No. 8,948,814, U.S. Patent No. 9,118,794, and U.S. Patent No. 8,712,471 ("Asserted Patents") have been infringed, either literally and/or under the doctrine of equivalents, by LG;
- b. Award Plaintiff past and future damages together with prejudgment and post-judgment interest to compensate for the infringement by LG of the Asserted Patents in accordance with 35 U.S.C. § 284; and

c. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: February 8, 2016

Respectfully submitted,

By: Stephen E. Noona

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